

TERADA YOSUKE  
APPLICANT(s): DAINIPPON PRINTING CO LTD [000289] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 63-156233 [JP 86156233]  
FILED: June 24, 1988 (19880624)  
INTL CLASS: [5] B42D-015/10; G06K-019/077; B42D-109/00  
JAPIO CLASS: 30.1 (MISCELLANEOUS GOODS -- Office Supplies); 45.3 (INFORMATION PROCESSING -- Input Output Units)  
JOURNAL: Section: M, Section No. 950, Vol. 14, No. 140, Pg. 44, March 16, 1990 (19900316)

## ABSTRACT

PURPOSE: To prevent the breakage of an IC chip caused by stress concentration occurring on a substrate at and around an insulating groove by a method wherein the insulating groove extending orthogonally to the longitudinal direction of a card base material is provided outside an area corresponding to an IC chip mounting area.

CONSTITUTION: An insulating groove 22 extends orthogonally to the longitudinal direction of a card base material 30 on the slightly righthand side of the center of a substrate 12. Since an IC chip 17 is disposed on the slightly lefthand side of the center of the substrate 12, the insulating groove 22 is disposed out of an external terminal-side area corresponding to an area for mounting the IC chip 17. The IC card 10 in use is subjected to a bending action in the longitudinal direction of the card base material 30, whereby stress concentration occurs on the substrate 12 in the vicinity of the insulating groove 22 extending orthogonally to the longitudinal direction of the card base material. Since the insulating groove 22 is disposed outside of the external terminal-side area corresponding to the area for mounting the IC chip 17, the IC chip 17 can be prevented from the breakage caused by the stress concentration occurring on the substrate 12 in the vicinity of the insulating groove 22.

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04024668 \*\*Image available\*\*  
INK DISCHARGE DEVICE

PUB. NO.: 05-016368 [\*JP 5016368\* A]  
PUBLISHED: January 26, 1993 (19930126)  
INVENTOR(s): MATSUDA KOEI  
IWASAKI MASAYA  
NOGUCHI TOMOYUKI  
SHIRAISHI HAJIME

APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 03-170046 [JP 91170046]  
FILED: July 10, 1991 (19910710)  
INTL CLASS: [5] B41J-002/05; B41J-002/125  
JAPIO CLASS: 29.4 (PRECISION INSTRUMENTS -- Business Machines); 45.3 (INFORMATION PROCESSING -- Input Output Units)  
JAPIO KEYWORD: R105 (INFORMATION PROCESSING -- Ink Jet Printers)

JOURNAL: Section: M, Section No. 1422, Vol. 17, No. 286, Pg. 93, June  
02, 1993 (19930602)

## ABSTRACT

PURPOSE: To obtain ink boiling energy which is always stabilized irrespective of variation in environment such as loss of an electrode or the like by a method wherein a pulse width of driving voltage (pulse voltage) is controlled according to a current between electrodes.

CONSTITUTION: A current flowing through conductive ink 1 between electrodes 4, 5 is detected by a current detecting means 9, which produce an output for a time control means 10. Application time is controlled so that heat generation per unit volume is the same every time. The output from the control means 10 is supplied to a selective application 8. As a result, the electrodes 4, 5 are energized, and processes such as heating, evaporation, generation of a bubble, variation in pressure, discharge, and extinction of the bubble are repeated.

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\$13.30 Estimated cost this search  
\$69.22 Estimated total session cost 2.720 DialUnits

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